

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A pulse generating circuit for successively outputting a pulse of positive polarity and a pulse of negative polarity, comprising:

a transformer (14) and a single switch (16) which are connected in series across a DC power supply (12);

wherein an output is produced across a secondary winding (18) of said transformer (14).

2. (Currently Amended) A pulse generating circuit according to claim 1, wherein either one of the pulse of positive polarity and the pulse of negative polarity is output in a period during which said switch (16) is turned on, and a pulse of opposite polarity is output due to electromotive forces induced when said switch (16) is turned off.

3. (Currently Amended) A pulse generating circuit according to claim 2, wherein if said DC power supply (12) has a power supply voltage  $V$ , said transformer (14) has a winding ratio  $n$  and a primary inductance value  $L1$ , and a current flowing through a primary winding (22) of said transformer (14) is cut off at a rate  $(di/dt)$ , then the pulse output in the period during which said switch (16) is turned on has a pulse voltage determined by  $nV$ , and the pulse of opposite polarity has a pulse voltage determined by  $nL1(di/dt)$ .

4. (Currently Amended) A pulse generating circuit according to ~~any one of claims 1 through 3~~ claim 1, further comprising:

a capacitor (26) connected in parallel to said switch (16).

5. (Currently Amended) A pulse generating circuit according to ~~any one of claims 1 through 4~~claim 1, wherein a capacitive load (30) is connected across said secondary winding (18), further comprising:

a diode (32) connected in parallel to said switch (16) in a reverse orientation.

6. (Currently Amended) A pulse generating circuit according to ~~any one of claims 1 through 5~~claim 1, wherein said switch (16) comprises a semiconductor switch.